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09/831,887	05/23/2001	Yasutaka Ito	20523US0PCT	8002

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EXAMINER

FASTOVSKY, LEONID M

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 08/11/2003

11

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/831,887

Applicant(s)

ITO ET AL.

Examiner

Leonid M Fastovsky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Double Patenting*

1. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

2. Claims <sup>1-28</sup>~~28~~ are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims <sup>1-26</sup>~~26~~ of copending Application No. 10/387, ~~442~~ <sup>443</sup>. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

3. The indicated allowability of claims 1-28 is withdrawn in view of the newly discovered reference(s) to Kawada et al (5,665,260). Rejections based on the newly cited reference(s) follow.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawada et al (See Abstract).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-6, 9-10 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawada et al in view of Miyata (2002/0027130).

Kawada discloses substantially the claimed features including a nitride ceramic heater comprising a ceramic substrate and a heating element, and a working surface having roughness of 0.05 micron to 200 microns, and the disk having diameter of 160 mm (Col. 4, line 56). Kawada does not teach a carbide ceramic and an oxide ceramic, and one of the elements selected from Na, B, Y, Li and Ca. Miyata teaches a nitride ceramic, a carbide ceramic, and an oxide ceramic (Col. 2- 0034, 0035, 0036) and element Y (Col. 5, 0098). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use ceramics as taught by Miyata and element Y to improve performance of the ceramic heater.

8. Claims 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawada in view of Miyata and further in view of Noda et al (5,753,893).

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Kawada in view of Miyata discloses substantially the claimed features, but does not disclose that a weight of elements Y, Ca is not less than 0.1%. Noda et al discloses a weight of element Y to be in a range of 0.3 to 13% (Claim 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use elements Y or Ca by weight as taught by Noda et al to improve performance of the heater.

9. Claims 8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawada in view of Miyata and further in view of Yamada et al (5,998,320).

Kawada in view of Miyata discloses substantially the claimed features, but does not disclose that a weight of elements Na and B is not less than 0.05 ppm. Yamada et al teaches that the amount of Ca was smaller than 100 ppm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Ca in the amount of not less than 0.05 ppm as taught by Yamada to improve performance of the heater.

10. Claims 13-16 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawada et al in view of Miyata above, and further in view of Ushikawa (6,140,256).

Kawada discloses substantially the claimed features except that a semiconductor wafer is heated while being supported by pins at a distance of 1 micron to 5000 microns (5 mm) apart from the work-heating surface of the ceramic heater. Ushikawa discloses pins 41, 42 and 43 supporting a wafer W at a distance of from 0.2 mm to 2 mm (Col. 4, lines 30-44). It would have been obvious to one having ordinary skill in the art at the

time the invention was made to use supporting pins a a distance as taught by Ushikawa to improve a process of wafers heating.

11. Claims 3-4 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawada et al in view of Kariya (6,452,137).

Kawada discloses substantially the claimed features, but does not disclose a carbide ceramic, an oxide ceramic and a thermal conductivity of a ceramic substrate. Kariya discloses a carbide ceramic and an oxide ceramic (Col.4, lines 29-39) and a thermal conductivity of a ceramic substrate of 180 W/mK (Col 4, lines 40-43). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a thermal conductivity as taught by Kariya to improve performance of the heater.

12. Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawada et al in view of Miyata yet al and further in view of Natsuhara et al (6,078,027).

Kawada in view of Miyata discloses substantially the claimed features , except that a thickness of a ceramic substrate is 0.5 to 5 mm. Natsuhara shows a thickness of a ceramic substrate in a range of 0.1 to 0.5 mm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a thickness of a ceramic substrate as taught by Natsuhara to improve performance of the heater.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid Fastovsky whose telephone number is (703)306-5482. The examiner can normally be reached on Monday-Thursday (7:30-6:00).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sang Paik can be reached on (703) 308-1147. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7764 for regular communications and (703) 308-3463 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.

Lmf  
August 6, 2003

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Leonid Fastovsky

SANG Y. PAIK  
PRIMARY EXAMINER

S. Paik